

# Work Order ID 85792

June-15-12 10:48:05 AM

ASAP

\*85792\*

Page 1

Item ID: D4151-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Basket Fwd Hardpoint Assembly, Lower

Stop \*NS2\*

Start Date: 15/06/2012 Start Qty: 12.00 \*12\*

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 12.00 \*12\*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/15 Tooling:

Run Start \*NR1\*

QC:

Date: SPC (Y/N):

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4151	C								
100		0.00							
*100*									
Small Fab	Memo	0.00							
Small Fab	1- Assemble as per dwg								
110	QC5- Inspect part completeness to step on W/O	0.00							
*110*									
QC	Memo	0.00							
Quality Control									
120	Identify as per dwg & Stock Location: 103	0.00							
*120*									
Packaging	Memo	0.00							
Packaging									

12x

12/07/09

5/12/10

12

120

12-7-10

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**\*85792\***

Page 2

Item ID: D4151-041

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Basket Fwd Hardpoint Assembly, Lower

Start Date: 15/06/2012 Start Qty: 12.00

**\*12\***

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 12.00

**\*12\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00

**\*130\***

QC

Memo

0.00

Quality Control

*CK 12/7/11*

*U1207.01*



NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>Rework <input type="checkbox"/></div> <div>Skid-tube <input type="checkbox"/></div> <div>Crosstube <input type="checkbox"/></div> <div>Prod. Eng. Coord. <input type="checkbox"/></div> <div>Engineering <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Scrap <input type="checkbox"/></div> <div>Machining <input type="checkbox"/></div> <div>Small Fab <input type="checkbox"/></div> <div>Rec/Store/Packaging <input type="checkbox"/></div> <div>Quality <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Use-as-is <input type="checkbox"/></div> <div>Thermoforming <input type="checkbox"/></div> <div>Finishing <input type="checkbox"/></div> <div>Supplier <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Work Order Update <input type="checkbox"/></div> <div>Large Fab <input type="checkbox"/></div> <div>Composite <input type="checkbox"/></div> <div>Other <input type="checkbox"/></div> </div>	
--	---	--

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Offset/Setup									
Other									
Process									
Supplier									
Training									
Unauthorized									

### FAULT CATEGORY

Landing Gear	Hardware	General	Maintenance
<input type="checkbox"/> Bending Passes Below Min <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimp at Bending <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Other <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Ripples on Inner Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Breaking <input type="checkbox"/> Missing <input type="checkbox"/> Size/Length <input type="checkbox"/> Spinning <input type="checkbox"/> Threading <input type="checkbox"/> Wrong  <div style="text-align: center;"><b>Drill Holes</b></div> <input type="checkbox"/> Misaligned <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Undersized <input type="checkbox"/> Too Many	<input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Documentation/Data <input type="checkbox"/> Finish <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Inspection Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Jigs/Fixtures/Tooling <input type="checkbox"/> Kit Incorrect <input type="checkbox"/> Kit Missing	<input type="checkbox"/> Set-up <input type="checkbox"/> Supplier <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other <div style="border-bottom: 1px solid black; height: 15px; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 15px; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 15px; width: 100%;"></div>

# Picklist Print

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Page 1

Work Order ID: 85792

**\*85792\***

Parent Item: D4151-041

**\*D4151-041\***

Parent Item Name: Basket Fwd Hardpoint Assembly, Lower

Start Date: 15/06/2012

Required Date: 22/06/2012

Start Qty: 12.00

Required Qty: 12.00

## Comments:

IPP Rev:A 10.06.24 new issue DD verf:EC

IPP Rev:B 10.07.22 as per revB DD verf:JLM

11.01.21 as per dwg revC DD verf:JLM

IPP Rev:C

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4151-1 <b>*D4151-1*</b> Lower Hardpoint Plate		Manufactured	No			100	Each	12.0000	2	24			
									**				
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST103				12					
				83346				12					
D4151-5 <b>*D4151-5*</b> Fwd Basket Instl Stud		Manufactured	No			100	Each	6.0000	1	12			
									**				
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST103				6					
				83922				6					
AN4C13A <b>*AN4C13A*</b> BOLT		Purchased	No			100	Each	44.0000	2	24			
									**				
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST357				44					
				120187				1					
				121827				43					

EP 12/07/06  
 385960 (24x)  
 EP 12/07/06  
 385961 (12x)  
 EP 12/07/06  
 M122141 (24x)  
~~385961~~

# Picklist Print

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Page 2

Work Order ID: 85792

\*85792\*

Parent Item: D4151-041

\*D4151-041\*

Parent Item Name: Basket Fwd Hardpoint Assembly, Lower

Start Date: 15/06/2012

Required Date: 22/06/2012

Start Qty: 12.00

Required Qty: 12.00

MS21043-4

Purchased

No

100

Each

1,181.000

2

24

\*MS21043-4\*

\*\*

Nut

## Location

## Loc Qty

## Loc Code

FG

40

104603

40

ST301

1141

119546

115

120308

29

121162

497

121652

500

NAS1149C0432R

Purchased

No

100

Each

3,816.000

4

48

\*NAS1149C0432R\*

\*\*

Washer

## Location

## Loc Qty

## Loc Code

ST297

1102

117291

102

119124

1000

ST298

2714

121255

2714

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/>            Other <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Offset/Setup											
Other											
Process											
Supplier											
Training											
Unauthorized											

FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending Passes Below Min <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimp at Bending <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Other <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Ripples on Inner Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>Hardware</b> <input type="checkbox"/> Breaking <input type="checkbox"/> Missing <input type="checkbox"/> Size/Length <input type="checkbox"/> Spinning <input type="checkbox"/> Threading <input type="checkbox"/> Wrong  <b>Drill Holes</b> <input type="checkbox"/> Misaligned <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Undersized <input type="checkbox"/> Too Many	<b>General</b> <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Documentation/Data <input type="checkbox"/> Finish <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Inspection Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Jigs/Fixtures/Tooling <input type="checkbox"/> Kit Incorrect <input type="checkbox"/> Kit Missing	<input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Off-Set <input type="checkbox"/> Orientation Misread <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Lost <input type="checkbox"/> Part Moved <input type="checkbox"/> Raw Material	<input type="checkbox"/> Set-up <input type="checkbox"/> Supplier <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other _____ _____ _____

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4151-041	BASKET FWD HARDPOINT ASSY (LOWER)
		X	D4151-043	BASKET FWD HARDPOINT ASSY (UPPER)
1	2		D4151-1	LOWER HARDPOINT PLATE
2		2	D4151-3	UPPER HARDPOINT PLATE
3	1		D4151-5	FWD BASKET INSTL STUD (LOWER)
4		1	D4151-7	FWD EYEBOLT RECEIVER (UPPER)
5	2	2	AN4C13A	BOLT
6	2	2	MS21043-4	NUT
7	4	4	NAS1149C0432R	WASHER

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER

NO. 85792 MLJ  
12/06/15

RELEASED  
R 2011-01-08  
JMP

**D4151-043 BASKET FWD HARDPOINT ASSY (UPPER)**

**D4151-041 BASKET FWD HARDPOINT ASSY (LOWER)**

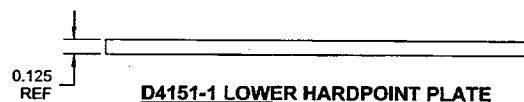
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4151-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT:
  - D4151-041 = 0.88 lbs
  - D4151-043 = 1.17 lbs

C	AN4 HARDWARE WAS AN3 (B6-1, C3-1 & D3-1); Ø0.252 WAS Ø0.191 (C5-2, D1-2); TIGHTENED TOL ON 1.000 DIM (C5-2, D1-2, C7-3, C5-3); Ø0.250 WAS Ø0.191 (C6-3, B4-3); 1.83 WAS 1.75 (C1-2), 2.84 WAS 2.78 (B3-3) AND 1.88 WAS 1.89 (C1-3) TO PRESERVE 1.SED. REASON: SEE D407-797 DESIGN JOURNAL.	MB	10.12.14
B	ADDED D4151-5/7 (SHT 3); D4151-5 WAS D3911-1 (ZN B6-1 & D3-1); D4151-7 WAS D3911-3 (ZN C4-1 & D3-1) ITEMS #5, 6 & 7 REPLACE MS20815-4M20 (ZN C3-1, D3-1 & B6-1); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN C5-2); Ø0.191 2 PL REPLACES Ø0.129 4 PL (ZN D1-2). REASON: SEE TR-D350-607-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.22
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.14		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. <b>D4151</b> TITLE <b>BASKET FWD HARDPOINT</b> SCALE <b>NTS</b> REV. C SHEET 1 OF 3 COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT, ALL RIGHTS AND CONFIDENTIALITY, ARE SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			







**D4151-1 LOWER HARDPOINT PLATE**



**D4151-3 UPPER HARDPOINT PLATE**

RELEASED  
2011-01-18  
MID

1) MATERIAL: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.125 THK  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF. DART SPEC. M304S11GA OR M303S11GA

- 2) FINISH: NONE  
REF. DART SPEC. M304ST1GA OR M303ST1GA
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT ASSEMBLY
- 7) WEIGHT:
- D4151-1 = 0.24 lbs
  - D4151-3 = 0.23 lbs

DESIGN	1A	<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	SC	DRAWING NO.	REV. C
MFG. APPR.	AP	D4151	SHEET 2 OF 3
APPROVED	AP	TITLE	SCALE
DE APPR.		<b>BASKET FWD HARDPOINT</b>	NTS
DATE	10.12.14	COPYRIGHT © 2016 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE BASIS OF CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR CONTENT OR DISCLOSED TO ANY OTHERS WITHOUT PERMISSION	





